## Joint IEPR and Renewables Committee Workshop Exploring Feed-In Tariffs for Renewable Energy Projects Over 20 MW Discussion Questions

- 1. Are renewable energy projects over 20 MW having difficulty receiving financing?
  - a. Are renewable energy projects over 20 MW with transmission access and permitting approval having difficulty receiving financing?
  - b. How do financing, transmission planning, and permitting risks interact?
  - c. Do delays in project development affect financial viability of renewable energy projects with signed RPS contracts?
- 2. Would feed-in tariffs help? If not, what other options would help renewable energy obtain low-cost financing?
- 3. How could a feed-in tariff be designed to address the following:
  - a. Minimize costs for ratepayers?
  - b. Achieve optimal pricing? What should be used as competitive benchmarks for technology-specific, cost-based feed-in tariffs?
  - c. In Spain, feed-in tariffs for solar energy were oversubscribed within a year. In Slovakia, rates for solar were set to low to encourage any real growth. In France, feed-in tariffs for solar were initially set too low and response was poor. To avoid similar situations, how should feed-in tariffs be adjusted to respond to either lack of response or over subscription?
  - d. What steps have been taken to reduce the risk of speculative queuing for feed-in tariffs for renewable energy projects up to 20 MW in size? How has this issue been addressed in Europe? Would similar processes be useful for projects greater than 20 MW? Would the following mechanisms be appropriate and/or necessary for projects greater than 20 MW?
    - 1. Application fees (non-refundable)?
    - 2. Security accompanied with project milestones? (e.g. up-front fee, refundable if project comes online by milestone date)
    - 3. Security increases in exchange for time extensions?
  - e. Utilities are concerned that feed-in tariffs leave the utilities exposed to the risks of paying too much and relying on commitments from renewable energy generators that may not actually deliver expected levels of renewable energy. How can feed-in tariffs be designed to share these risks with developers without jeopardizing the ability of the project to obtain financing? What incentives can be integrated into the design of a feed-in tariff to address utilities' concerns that renewable energy projects receiving feed-in tariffs:
    - 1. Meet the expected online date?
    - 2. Deliver energy in the amount contracted?

- 3. Smoothly integrate renewables into the electricity system?
- f. How can utilities plan for the price paid, location, and total amount of renewable energy interconnected through feed-in tariffs? For example, should feed-in tariffs vary based on renewables located in a priority CREZ with proximity to a permitted transmission line?
- 4. What programs and opportunities are available that could provide financing to a project receiving a feed-in tariff?
- 5. Feed-in tariffs can help reduce the cost of generation over time if the tariffs are stepped down over time to encourage cost cutting from manufacturers, developers, and installers.
  - a. Which feed-in tariffs in the U.S., Canada, or Europe have been the most successful in this regard? Would such designs work well in California?
  - b. What feed-in tariff designs best encourage innovation within the renewables industry while continuing to put downward pressure on costs?
- 6. How can feed-in tariffs be designed to provide the best opportunities for the project to obtain financing?
  - a. How can feed-in tariffs be structured to reduce regulatory risk?
  - b. How can feed-in tariffs be structured to ensure that the facility would receive payment from feed-in tariffs regardless of buyer's credit status?
  - c. Is there a risk that once awarded, fixed-price feed-in tariffs for a given year could change? For example, if a project coming online in 2010 was awarded 20 cents/kWh for 20 years, what is needed to ensure that amount cannot be changed at a later date? How could such risk be reduced? Are there examples of feed-in tariffs that cannot be changed once awarded?
  - d. What level of transparency is needed to best promote investment in renewables?
- 7. Should feed-in tariffs be set at a different level for utility-owned projects compared to developer-owned projects?